

STATEMENT
OF
WORK
(SOW)

FOR THE REBUILD OF THE

CUMMINS VT-400 ENGINE

CRANKSHAFT OR CRANKSHAFT
ASSEMBLY

FOR THE AAV

NSN 2815-01-123-2495

NSN 2815-01-108-5384

SOW-04-CBG-8B334B-1/1

Dated: December 17, 2001

STATEMENT OF WORK FOR THE REBUILD OF THE VT 400 ENGINE CRANKSHAFTS
OR CRANKSHAFT ASSEMBLY FOR THE AAV
NSN 2815-01-123-2495 AND NSN 2815-01-108-5384

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**STATEMENT OF WORK FOR THE REBUILD OF THE VT 400 ENGINE
CRANKSHAFTS OR CRANKSHAFT ASSEMBLY FOR THE AAV
NSN 2815-01-123-2495 AND NSN 2815-01-108-5384**

1.0 SCOPE. This Statement of Work (SOW), along with RS-88643B-50/2 Draft establishes and sets forth tasks and identifies the work efforts that shall be performed for the rebuild of the VT-400 Engine Crankshafts or Crankshaft Assembly of the Assault Amphibious Vehicle (AAV). This document contains minimum requirements to restore the VT-400 Engine Crankshafts or Crankshaft Assembly of the AAV, hereafter referred to Crankshafts or Crankshaft Assembly, to Condition Code "A". Condition Code "A" is defined as "serviceable/issuable without qualification, new, used, repaired or reconditioned materiel which is serviceable and issuable to all customers without limitations or restrictions". National Stock Number 2815-01-123-2495 and 2815-01-108-5384 identifies the Crankshafts.

INFORMATION ON THE CRANKSHAFT REBUILDING (*Note*). This information is extracted from CUMMINS ALTERNATE REPAIR MANUAL 3379035 and incorporated into R/S 88643B-50/2 Draft. This is a final draft copy dated June 1985 and is awaiting final approval. This publication is being used in depot facilities to rebuild the VT 400 CUMMINS ENGINE CRANKSHAFTS.

1.1 BACKGROUND. Rebuild is defined as that maintenance technique to restore an item to a standard as near as possible to original or new condition in appearance, performance, and life expectancy. This is accomplished through disassembly of the item; inspection of all parts or components, repair or replacement of worn or unserviceable parts using original manufacturing tolerances and/or specifications and subsequent reassembly of the item.

2.0 APPLICABLE DOCUMENTS. The following documents form a part of this SOW to the extent specified. Unless otherwise specified, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto which is in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirement.

2.1 Military Standards

MIL-STD-2073-1D

DoD Standard Practice for Military Packaging

MIL-STD-129

DoD Standard Practice for Military Marking

2.2 Other Government Documents and Publications

DoD 4160.21-M

Defense Disposition Manual

DoD 4000.25-1-M

MILSTRIP Manual

TM 2350-45

DMA Standard Procedures

3379035

Cummins Technical Manual Alternate Repair Manual

R/S 88643B-50/2 Draft

CRANKSHAFT ASSEMBLY

Rebuilt description	Page 1
Special equipment requirements	Page 2
Illustrations/parts breakdown	Page 3
Disassemble	Page 5
Cleaning of Parts	Page 5
Inspection of parts	Page 7
Special procedures	Page 11
Finishing	Page 17

(1) A speedy sleeve may be used to bring the main oil seat (journal) to specifications

Assembly	Page 17
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(1) When required to make an assembly

Markings	Page 17
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Final inspection and acceptance	Page 17
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Military Handbooks (For Guidance)

MIL-HDBK-61

Configuration Management Guidance

2.3 Industry Standards

ANSI/ISO/ASQC
Q9003-1994

Quality System-Model for Quality
Assurance in Final Inspection and Test

Industry Standards (For Guidance)

ANSI/EIA-649

National Consensus Standard for
Configuration Management

Copies of Military Standards and Specifications are available from the DoD Single Stock Point, Document Automation and Production Service, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Commercial (215) 697-2179 or DSN 442-2179 or <http://www.dodssp.daps.mil>. Copies of other Government documents and publications requirements shall be obtained through the Contracting Officer: Contracts Department (Code 891), P.O. Drawer 43019, 814 Radford Blvd., Marine Corps Logistics Bases, Albany, Georgia 31704-3019, commercial telephone number (229) 639-6761 or DSN 567. Copies of Engineering drawing, if applicable, shall be obtained from Supply Chain Management Center, Attn: (Code 583-1) 814 Radford Blvd., STE 20302, Albany, Georgia, 31704-0320, Commercial (229) 639-6410 or DSN 567-6410.

3.0 REQUIREMENTS

3.1 General Tasks. In fulfilling the specified requirements, the contractor shall:

- a. Provide materials, labor, facilities, and services necessary to troubleshoot, test, diagnose, engineer, integrate, install, restore, and calibrate as required to make the Crankshaft and Crankshaft Assembly fully operational. Upon completion of the restoration, the Crankshaft and Crankshaft Assembly shall be Condition Code "A".
- b. Conduct final-on-site testing, which may be witnessed by Marine Corps Systems Command (MCSC) (CBG), Albany, Georgia representative at his/her discretion.
- c. The contractor shall be responsible for all structural, electrical, and mechanical requirements associated with the rebuild of the Crankshaft and Crankshaft Assembly as specified in Cummins Technical Manual 3379035, R/S 88643B-50/2 Draft.
- d. Ensure the Crankshaft and Crankshaft Assembly meet the configuration identified in R/S 88643B-50/2 Draft.
- e. All mandatory replacement parts identified in R/S 88643B-50/2 Draft shall be replaced 100%. Economical replacement parts may be reused if they meet the applicable inspection requirements in TM 2350-45. All parts shall be disposed of in accordance with DoD 4160.21-M.

3.2 Detailed Tasks. The following tasks describe the different phases for the rebuild of the Crankshaft or Crankshaft Assembly.

3.2.1 Phase I - Rebuild. The contractor shall receive Crankshaft or Crankshaft Assembly for rebuild. The contractor shall then disassemble the Crankshaft or Crankshaft Assembly into components and conduct the rebuild process. The contractor shall rebuild components in

accordance with the requirements in R/S 88643B-50/2 Draft, Cummings Technical Manual 3379035, and this SOW. The contractor shall be responsible for supplying all equipment, tools, test equipment, and materials for the conduct of this effort. The contractor shall be responsible for the integration and assembly of all components. The configuration identification for the Crankshaft or Crankshaft Assembly shall be shown in R/S 88643B-50/2 Draft. Upon completion of the rebuild, the Crankshaft or Crankshaft Assembly shall be in condition Code "A".

3.2.2 Phase II - Inspection, Testing, and Acceptance. Inspection, testing, and acceptance of the Crankshaft or Crankshaft Assembly shall be conducted in accordance with RS/88643B-50/2 Draft, and ANSI/ISO/ASQC Q9003-1994. The contractor shall correct any deficiencies discovered.

3.2.3 Phase III – Packaging, Handling, Storage, and Transportation (PHS&T)

a. The contractor shall be responsible for the preservation and packaging for items being repaired under the terms of this Statement of Work. Items scheduled for long-term storage or overseas destinations shall be in accordance with the level "A" requirements with MIL-STD-2073-1D, Method 20. Items scheduled for domestic shipment for immediate use or short-term storage shall be to level "B" requirements.

b. Marking for shipment and storage shall be in accordance with MIL-STD-129.

c. The Marine Corps shall provide the contractor with the shipping address (es) for the delivery of the repaired equipment. The contractor shall be responsible for arranging for shipment to the pre-designated site(s). The Marine Corps shall be responsible for transportation costs associated with shipping the Crankshaft or Crankshaft Assembly to and from the Contractors.

3.3 Configuration Management

a. The contractor shall apply configuration control procedures to established configuration items. The contractor shall not implement configuration changes to an item's documented performance or design characteristics without prior written authorization. If deemed necessary to temporarily depart from the authorized configuration, the contractor shall prepare and submit a Request For Deviation (RFD). MIL-HDBK-61 and ANSI/EIA-649 provide guidance for preparing RFDs.

b. The creation and submission of RFDs shall be accomplished using MEARS CREATE software, which resides at a secure web site, <https://mearsweb.redstone.army.mil>. For the purpose of gaining access to the web site, the contractor shall request user-id and password privileges from the Requiring Office identified in Block 6 of the applicable Contract Data requirements List. The contractor shall direct technical or functional questions concerning usage of MEARS CREATE software to the Requiring Office for guidance. The contractor shall notify the Requiring Office by electronic mail when completed MEARS RFDs are ready for formal submission.

3.4 Government Furnished Equipment (GFE)/Government Furnished Materiel (GFM). The Management Control Activity (MCA/Code 573-2) will coordinate GFE/GFM requests And maintain a central control system on all government owned assets in the contractor's possession. The MCA will forward a GFE Accountability Agreement to the Contractor for signature on an annual basis to establish a chain of custody and property responsibility for Marine Corps assets. The contractor is to acknowledge receipt of GFM to the MCA within 15 days of receipt. (This can be done by mailing (Materiel Management Department, Management Control Activity (Code 573-2) 814 Radford Blvd, STE 20320, Albany GA 31704-0320) or faxing (commercial 229-639-5498 or DSN 567-5498) a copy of the DD3148).

3.5 Contractor Furnished Materiel (CFM). The Contractor may requisition materiel as required in the performance of this SOW through the DoD Supply System. DoD 4000.25-1-M (MILSTRIP) Chapter 11 provides guidance to the contractors on the requisitioning process. The decision to utilize CFM procured from the DoD Supply System shall be based upon cost effectiveness, availability of materiel and the required completion/delivery date.

3.6. Quality Assurance Provisions

3.6.1 The performance of the contractor's quality of work performed, materiel provided and documents written shall be subject to in-process review and inspection by the MCSC (CBG), Albany, Georgia representative during contract performance. Inspection may be accomplished at any work location. The MCSC (CBG), Albany, Georgia representative shall be permitted to observe the work/tasks accomplishment and/or to conduct inspections at any reasonable hour. Acceptance Tests shall be held in-plant. The MCSC (CBG), Albany, Georgia representative requires, at a minimum, two weeks notification of acceptance test to allow for sufficient time for MCSC (CBG), Albany, Georgia representative to witness acceptance, if he or she desires. Inspection by the MCSC (CGB), Albany, Georgia representative of all acceptance tests, materiel and associated lists furnished hereunder does not relieve the contractor from any responsibility regarding defects or other failures to meet the SOW requirements which may be disclosed prior to final acceptance.

3.6.2 The contractor shall provide and maintain a Quality System that as a minimum adheres to the requirements of ANSI/ISO/ASQC Q9003-1994. The contractor's work shall be subject to in-process reviews and inspections for compliance with these procedures and standards by MCSC (CBG), Albany, Georgia representative. Noncompliance with these quality assurance procedures resulting in degraded quality of work may result in a stop-work order requiring action by the contractor to correct the work performed and to enforce compliance with quality assurance procedures or face contract termination. Notwithstanding such inspection, it shall be the contractor's responsibility to ensure that the entire system meets the performance requirements of this SOW.

4.0 Reports. All reports/deliverables shall be submitted in hard copy to Marine Corps System Command, Attn: (GBG), 814 Radford Blvd., Suite 20320, Albany. Georgia 31704-0320, unless directed otherwise in a Contract Data Requirements List.

4.1 Monthly Production Status Report. A monthly Production Status Report shall be submitted summarizing the progress and status of the Cummins VT-400 Engine Crankshaft or Crankshaft Assembly.

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP _____ TM _____ OTHER <input checked="" type="checkbox"/>
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D. SYSTEM/ITEM Cummins VT-400 Engine Crankshaft	E. CONTRACT/PR NO.	F. CONTRACTOR
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1. DATA ITEM NO. A001	2. TITLE OF DATA ITEM Contractor's Progress, Status, and Management Report	3. SUBTITLE Management
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4. AUTHORITY (Data Acquisition Document No.) DI-MGMT-80227	5. CONTRACT REFERENCE SOW 4.1	6. REQUIRING OFFICE MCSC (CBG), Albany, GA
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7. DD 250 REQ LT	8. DIST STATEMENT REQUIRED A	9. FREQUENCY MTHLY	10. DATE OF FIRST SUBMISSION See Blk 16	11. DATE OF SUBSEQUENT SUBMISSION See Blk 16	12. DISTRIBUTION a. ADDRESSEE MCSC (CBG) Albany, GA	13. COPIES Draft 0	14. Final Reg 1	15. Repro 0
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16. REMARKS Contractor format is authorized. Blk 4 - Tailor DI-MGMT-80227 as follows: Delete paragraphs 10.3g, 10.3h, 10.3i, and 10.3j. Blk 12 - The reporting period shall be from the first to last business day of each month. Initial submission shall be 60 DAC. Blk 13 - Subsequent submissions shall be 10 days after the last business day of each month. Distribution StatementA: Approved for public release; Distribution is unlimited.					15. TOTAL 0 1 0			
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G. PREPARED BY <i>RE Hoffman</i>	H. DATE 12/13/01	I. APPROVED BY <i>RE Hoffman</i>	J. DATE 12/13/01
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17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP _____ TM _____ OTHER <input checked="" type="checkbox"/>
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D. SYSTEM/ITEM Cummins VT-400 Engine Crankshaft	E. CONTRACT/PR NO.	F. CONTRACTOR
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1. DATA ITEM NO. B001	2. TITLE OF DATA ITEM Request For Deviation	3. SUBTITLE Configuration Management
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4. AUTHORITY (Data Acquisition Document No.) DI-CMAN-80640C	5. CONTRACT REFERENCE SOW 3.3	6. REQUIRING OFFICE MCLBA (583)
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7. DD 250 REQ NO	8. DIST STATEMENT REQUIRED A	9. FREQUENCY ASREQ	10. DATE OF FIRST SUBMISSION See Blk 16	11. DATE OF DATE	12. DATE OF SUBSEQUENT SUBMISSION See Blk 16	13. DISTRIBUTION a. ADDRESSEE PM, AAV MCLBA (583-1)	14. COPIES Draft 0	15. Final Reg 0	16. Repro 0
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16. REMARKS
Blk 4 - MEARS CREATE user-id and password will be assigned by the Requiring Office.
Blk 4: MEARS RFD text files shall be submitted electronically using MICROSOFT (.doc) or ADOBE (.pdf) formatted software products.
Blks 12 & 13 - RFDs notification shall be accomplished via e-mail to the following address: mbmatcomconfigmgmt@matcom.usmc.mil
Blk 14: Accompanying figures to the text files shall be in a MICROSOFT format or CCITT Group 4 graphic file. Group 4 files shall have a minimum density of 600 dpi.
Blk 14: Questions concerning MEARS CREATE V8.3 functionality shall be directed to the Requiring Office. POC is Doug Smith who may be contacted at DSN 567-6424/25 or email: smithdc@matcom.usmc.mil

Distribution Statement A: Approved for Public Release; Distribution is Unlimited.

G. PREPARED BY <i>William L. Bradley</i>	H. DATE	I. APPROVED BY <i>[Signature]</i>	J. DATE 13/Dec/01
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17. PRICE GROUP
18. ESTIMATED TOTAL PRICE